CS Topic 3-Networks February 8th 2013

Mr Trofimczuk

**Instructions:**

* Time provided for test: 1hr 05min
* Total marks is 60
* Test results will be calculated into a percentage and worked out into a grade between 1-7 (see grade boundaries below) and published on Wilma. Results will also be sent to each student email address.
* **All electronic devices must be turned off**
* Answer all questions on the paper provided and ensure you have wrote your full name on each piece of paper-Remember to write an email address on answer paper.

**Test Questions:**

1. *Define the term computer network? (1 mark)*
2. *Define the term Bandwidth? (1 mark)*
3. *What is the synonym for data transfer rate? (1 mark)*
4. *Describe the key differences between the following LAN topologies: ring, star and bus (6 marks)*
5. *Explain how data is transmitted by package switching (6 marks)*
6. *Outline possible problems that may arise due to packet switching? (3 marks)*
7. *Explain how the use of a VPN has led to changes in working patterns-include both advantages and disadvantages? (6 marks)*
8. *Outline the role of the OSI seven layer model (3 marks)*
9. *Define the term router? (1 mark)*
10. *Identify two factors that should be considered when selecting transmission media (2 marks)*
11. List 3 possible factors that can effect network transmission speed and include a brief description in each example (3 marks)
12. *Define the term data packet (1 mark)*
13. *Define the term Data Protocol (1 mark)*
14. *Define TCP/IP (2 marks)*
15. *List 3 other protocols based on the TCP/IP protocol suite (3 marks)*
16. *Outline the differences between the following two types of data compression: Lossy & lossless? (4 marks)*
17. *Define the term latency? (2 marks)*
18. *Outline 3 types of network security (3 marks)*
19. *Describe the key characteristics of wireless networks (5 marks)*
20. *WiMAX is not intended to replace Wi-Fi. Instead, the two technologies complement each other. Discuss (6 marks)*

**Mr Trofimczuk’s Grade Boundaries for Computer Science (updated January 2013)**

Grade Percentage

1 0-25%

2 26-36%

3 37-47%

4 48-58%

5 59-69%

6 70-79%

7 80%-100%